



# Troubleshooting Notification Devices

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## Troubleshooting Notification Devices

### Overview

Cisco Unity Connection can be configured to call a phone or pager or send text or SMS messages to notify users of new messages and calendar events. See the following sections for information on troubleshooting problems with notification devices:

## Message Notifications through Phones is Slow for Multiple Users

When message notification through phones is slow for multiple users, use the following task list to determine the cause and to resolve the problem.

Following are the tasks to troubleshoot slow message notifications through phones for multiple users:

1. Confirm that ports are not too busy to handle message notification. See the [Ports Too Busy to Make Notification Calls Promptly](#).
2. Confirm that there are enough ports assigned to message notification. See the [Not Enough Ports Set for Message Notification Only](#).
3. Confirm that the phone system sends calls to ports that are set to answer calls. See the [Confirm that Phone System Sends Calls to the Ports Set to Answer Calls](#).

### Ports Too Busy to Make Notification Calls Promptly

When the ports that make notification calls are also set to perform other operations, they may be too busy to make notification calls promptly. You can improve notification performance by dedicating a small number of ports to exclusively make notification calls.

Systems that handle a large volume of calls may require additional ports to improve notification performance.

## Reviewing Port Configuration for Message Notification

- Step 1** In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.
- Step 2** On the Search Ports page, review the existing port configuration and determine whether one or more ports can be set to dial out for message notification only.

## Not Enough Ports Set for Message Notification Only

When a small number of ports are set to make notification calls and Unity Connection takes a lot of messages, the notification ports may not always be able to dial out promptly.

If the percentage of ports used for dialing out for message notification exceeds 70 percent usage during peak periods, review the existing port configuration and determine whether more ports can be set to dial out for message notification only.

If the percentage of ports used for dialing out for message notification does not exceed 70 percent usage during peak periods, the number of notification ports is adequate. Contact Cisco TAC to resolve the problem.

## Determining if Number of Message Notification Ports is Adequate

- Step 1** In Cisco Unity Connection Serviceability, expand Tools and select **Reports**.
- Step 2** On the Serviceability Reports page, select **Port Activity Report**.
- Step 3** On the Port Activity Report page, select the applicable file format for the report output.
- Step 4** Set a date range by selecting the beginning and ending month, day, year, and time.
- Step 5** Select **Generate Report**.
- Step 6** View the report output, depending on the file format that you chose in **Step 3**.
- Step 7** If the port usage during peak periods does not exceed 70 percent, the number of message waiting indication ports is adequate. Skip the remaining steps in this procedure.
- If the port usage during peak periods exceeds 70 percent, in Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.
- Step 8** On the Search Ports page, review the existing port configuration and determine whether more ports can be set to dial out for message notification only.

## Confirm that Phone System Sends Calls to the Ports Set to Answer Calls

If the phone system is programmed to send calls to a port on Unity Connection that is not configured to answer calls, it is possible for a call collision to occur, which can freeze the port.

## Confirming That Calls Are Being Sent to the Correct Cisco Unity Connection Ports

- Step 1** In Cisco Unity Connection Administration, expand **Telephony Integrations** > and select **Port**.
- Step 2** In the phone system programming, confirm that calls are only being sent to ports set to answer calls. Change the phone system programming if necessary.

- Step 3** If you make a change to the phone system programming, in Cisco Unity Connection Administration, select the display name of the port that you changed in [Step 2](#).
- Step 4** On the Port Basics page, under Phone System Port, select **Restart**.
- Step 5** When prompted that restarting the port terminates any call that the port is currently handling, select **OK**.
- Step 6** Repeat [Step 3](#) through [Step 5](#) for all remaining ports that you changed in [Step 2](#).
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## Message Notification Slow for a User

There are several possible reasons that message notification may appear to be slow for a user. Use the following task list to troubleshoot the possible causes:

1. The user settings may not be adequate for the needs of the user. See the [Message Notification Setup is Inadequate](#).
2. The user settings may need adjustment to more correctly map to the work schedule of the user. See the [Notification Attempts are Missed](#).
3. The user may not clearly understand how repeat notifications are handled by Cisco Unity Connection. See the [Repeat Notification Option is Misunderstood](#).

## Message Notification Setup is Inadequate

When a user complains that notification calls are not being received when expected, the problem may be with the notification settings.

### Determining Whether Notification Setup is Adequate

- Step 1** In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
- Step 2** On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
- Step 3** On the Notification Devices page, select the display name of the correct notification device.
- Step 4** On the Edit Notification Device page, confirm that the notification device is configured to meet the needs of the user. If the user has selected a very busy phone for Unity Connection to call, ask the user if there is an alternate device to use for message notification.
- Step 5** In the Related Links list, select **Edit Notification Device Details**, and select **Go**. Verify with the user that the notification schedule that is specified on the Cisco Personal Communications Assistant page is consistent with the days and times that the user is available to receive notification calls.
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## Notification Attempts are Missed

A user who is frequently away from or busy using a notification device (especially when the device is a phone) may repeatedly miss notification attempts. To the user, it appears that Cisco Unity Connection has delayed message notification.

**Resolving Missed Notification Attempts**

- Step 1** In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
- Step 2** On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
- Step 3** On the Notification Devices page, select the display name of the correct notification device.
- Step 4** On the Edit Notification Device page, check the **Repeat Notification If There Are Still New Messages** check box.
- Step 5** If the user has another notification device available, for On Notification Failure, select **Send To**, and select the device.
- Note** Because Unity Connection does not detect notification failure for SMTP devices, the On Notification Failure field is not available for notification devices of this type.
- Step 6** For phone or pager notification devices, in the Busy Retry Limit and RNA Retry Limit fields, increase the numbers so that Unity Connection makes more notification calls when the device does not answer or is busy.
- Step 7** For phone or pager notification devices, in the Busy Retry Interval and RNA Retry Interval fields, decrease the numbers so that Unity Connection makes notification calls more often when the device does not answer or is busy.
- Step 8** Select **Save**.
- Step 9** If you chose another device in **Step 5**, do the following sub-steps:
- On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
  - On the Notification Devices page, select the display name of the correct notification device.
  - On the Edit Notification Device page, enter settings for the additional device and select **Save**.
- Step 10** For phone notification devices, suggest that the user set up an answering machine for the notification phone, so that notification calls are received even when the user is unavailable.
- When Unity Connection is set to call a phone that has an answering machine, verify with the user that the answering machine greeting is short enough so that the machine starts recording before the notification message is repeated.

**Repeat Notification Option is Misunderstood**

Setting Unity Connection to repeat notification at a particular interval when there are still new messages can be useful for users who receive a lot of messages but who do not need immediate notification. However, when a user chooses not to have Unity Connection restart notification each time a new message arrives, setting a long interval between repeat notification calls may lead the user to believe that Unity Connection is delaying notification.

**Resolving a Repeat Notification Problem**

- Step 1** In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
- Step 2** On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
- Step 3** On the Notification Devices page, select the display name of the correct notification device.
- Step 4** On the Edit Notification Device page, in the Notification Repeat Interval box, set a shorter interval, such as 15 minutes and select **Save**.

## Message Notification Not Working at All

There are several possible reasons that message notification may not work at all for a user or group of users. Use the following task list to troubleshoot the possible causes:

- **For all types of notification device:** Confirm that the notification device is enabled and that the notification schedule is set correctly. See the [Notification Device Disabled or the Schedule Inactive](#).

Confirm that message notification is enabled for the correct types of messages. See the [Only Certain Types of Messages Set to Trigger Notification](#).

- **For phone or pager notification devices:** Confirm that the message notification phone number is correct and that it includes the access code for an external line if notification is to an external phone. See the [Notification Number Incorrect or Access Code for an External Line Missing \(Phone and Pager Notification Devices Only\)](#).

Confirm that the notification device is assigned to the correct phone system. See the [Message Notification Not Working at All, on page 5](#) section.

- **For SMS notification devices:** See the [SMS Notifications Not Working](#) for additional troubleshooting steps.
- **For SMTP notification devices:** See the [SMTP Message Notification Not Working at All for Multiple Users](#) for additional troubleshooting steps.

## Notification Device Disabled or the Schedule Inactive

When you are troubleshooting message notifications, start by confirming that the device is enabled, and that the notification schedule for the device is currently active.

### Verifying a Device Status and Schedule

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- Step 1** In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
- Step 2** On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
- Step 3** On the Notification Devices page, select the display name of the correct notification device.
- Step 4** On the Edit Notification Device page, confirm that the **Enabled** check box is checked.
- Step 5** In the Related Links list, select **Edit Notification Device Details**, and select **Go**. Verify with the user that the notification schedule that is specified on the Cisco Personal Communications Assistant page is consistent with the days and times that the user is available to receive notification calls.
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## Only Certain Types of Messages Set to Trigger Notification

Unity Connection can be set so that a user is notified only of certain types of messages. For example, if user notification is set up only for urgent voice messages, regular voice messages do not trigger the notification device.

## Changing the Message Types That Trigger a Notification Device

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- Step 1** In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
- Step 2** On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
- Step 3** On the Notification Devices page, select the display name of the correct notification device.
- Step 4** On the Edit Notification Device page, under Notification Rule Events, verify the selected message types with the user.
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## Notification Number Incorrect or Access Code for an External Line Missing (Phone and Pager Notification Devices Only)

If notifications to a phone or pager are not working at all, the user may have entered a wrong phone number for Unity Connection to call.

To place an external call, a user usually must dial an access code (for example, 9) to get an external line. When the phone system requires an access code, an external message notification phone number set in Unity Connection must include the access code.

In addition, some phone systems may require a brief pause between dialing the access code and being connected to an external line.

## Verifying the Device Phone Number and Access Code for a Phone or Pager Notification Device

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- Step 1** In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
- Step 2** On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
- Step 3** On the Notification Devices page, select the display name of the correct notification device.
- Step 4** On the Edit Notification Device page, under Phone Settings, confirm that the correct access code and phone number are entered in the Phone Number field for the device.
- If the phone system requires a pause, enter two commas between the access code and the phone number (for example, 9,,5551234).
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## Testing a Phone or Pager Notification Device

If the notification device is a home phone or another phone away from the office, ask the user to have someone available to answer the phone during the test.

1. Confirm that the notification device is on.
2. Set up a test phone (Phone 1) for single-line testing. Use a line connected to a port that is set to dial out for message notification.
3. On Phone 1, dial the notification number set in Unity Connection for the device.

If the pager is activated or the phone rings, you have confirmed that Unity Connection can call the device.

If the pager is not activated or the phone does not ring, there may be a problem with the device. Consult the documentation from the device manufacturer, or ask the user to obtain a different notification device and repeat the test.

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If the notification device is a mobile phone or pager, ask the user to have it available for the test.

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## Notification Device Phone System Assignment Incorrect (Phone and Pager Notification Devices Only)

### *Verifying Notification Device Phone System Assignment*

#### SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
2. On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
3. On the Notification Devices page, select the display name of the correct notification device.
4. On the Edit Notification Device page, under Phone Settings, note the phone system that is specified in the Phone System field.
5. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.
6. On the Search Ports page, confirm that the phone system assigned to the notification device has at least one port designated for message notification. Correct the port settings if necessary.

#### DETAILED STEPS

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- Step 1** In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
- Step 2** On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
- Step 3** On the Notification Devices page, select the display name of the correct notification device.
- Step 4** On the Edit Notification Device page, under Phone Settings, note the phone system that is specified in the Phone System field.
- Step 5** In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.
- Step 6** On the Search Ports page, confirm that the phone system assigned to the notification device has at least one port designated for message notification. Correct the port settings if necessary.
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## SMS Notifications Not Working

If SMS notifications are not working, in Cisco Unity Connection Administration, check the settings on the System Settings > Advanced > SMPP Providers > Edit SMPP Provider page to confirm that the settings match the settings specified by the provider.

If settings on the Edit SMPP Provider page are correct, enable the SMS Device (level 30) micro trace to collect trace information that helps you troubleshoot the problem. For detailed instructions on enabling and collecting diagnostic traces, see the “[Diagnostic Traces](#)” chapter.

Common error codes and explanations for SMS problems are listed in the following table:

## SMTP Message Notification Not Working at All for Multiple Users

SmppConnect failed	Unity Connection was unable to connect to the SMPP provider.
SmppBindTransmitter failed	Unity Connection was unable to sign in to the SMPP provider.
SmppSubmitSm failed	Unity Connection was unable to submit the SMS message to the SMPP provider.

## SMTP Message Notification Not Working at All for Multiple Users

If SMTP notifications are not working, in Cisco Unity Connection Administration, check the System Settings > SMTP Configuration > Smart Host page to confirm that a smart host is configured. To enable Unity Connection to send text message notifications using SMTP, your Unity Connection server must be configured to relay messages through a smart host.

If a smart host is already configured on the Smart Host page, note the IP address or host name of the smart host and check to make sure that this smart host is configured to accept messages from the Unity Connection server.

If the smart host settings are configured correctly, you can use traces to track whether the SMTP notification messages are being sent by the Unity Connection server. The default SMTP micro traces (levels 10, 11, 12 and 13) indicate if there is a permanent problem with delivery of a notification message to the smart host. The SMTP micro trace level 18 (Network Messages) shows the details if the notification message is delivered to the smart host. For detailed instructions on enabling and collecting diagnostic traces, see the “[Diagnostic Traces](#)” chapter.

## HTML Notifications Not Working

If HTML notifications are not working, in Cisco Unity Connection Administration, check the HTML notification device under User > Edit > Notification Devices page is enabled and valid email address is added.

Also, verify that SMTP smart host is configured on Unity Connection Administration page and the Connection SMTP Server and Connection Notifier services are up and running.

## HTML Summary Notification Not Working

If HTML Summary notifications are not working, verify that the correct template for Summary Notification is used under User > Edit > Notification Devices page on Connection Administration page. If the correct template is used, verify that valid <VOICE\_MESSAGE\_SUMMARY> tags are present inside the notification template with valid replaceable parameters are used inside the <VOICE\_MESSAGE\_SUMMARY> tags. For more information on missed call notification templates, see the [Notifications](#) chapter of System Administration Guide for Cisco Unity Connection Release 11.x at [https://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/11x/administration/guide/b\\_cucsag.html](https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/11x/administration/guide/b_cucsag.html)

## Message Notifications Function Intermittently

A possible cause for notification devices (such as phones, pagers, SMTP, and SMS) to function intermittently is that the schedule for the notification device for the user is not active during the time in question.

To correct the problem, edit the schedules of the notification devices for the user so that the notification devices are active when the user wants message notifications delivered. You must sign in to the user account in the Cisco Personal Communications Assistant (PCA) to modify the schedule for notification devices.

Cisco Unity Connection Administration does not expose schedules for notification devices. From the Notification Device page for the user in Unity Connection Administration, you can navigate to the Cisco PCA page for the user by selecting the Edit Notification Device Details link in the Related Links list.

For details on using the Cisco PCA, see the User Guide for the Cisco Unity Connection Messaging Assistant Web Tool (*Release 11.x*) at

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/11x/user/guide/assistant/b\\_11xcucugasst.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/11x/user/guide/assistant/b_11xcucugasst.html).

## Notification Devices Added in Unity Connection Administration Triggered at All Hours

When a notification device is added for a user in Cisco Unity Connection Administration, by default, the device is active at all times. If a user is receiving notifications at unexpected times, you can modify the notification device schedule to prevent this. You must sign in to the user account in the Cisco Personal Communications Assistant (PCA) to modify the schedule for notification devices.

Unity Connection Administration does not expose schedules for notification devices. From the Notification Device page for the user in Unity Connection Administration, you can navigate to the Cisco PCA page for the user by selecting the Edit Notification Device Details link in the Related Links list.

For details on using the Cisco PCA, see the User Guide for the Cisco Unity Connection Messaging Assistant Web Tool (*Release 11.x*) at

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/11x/user/guide/assistant/b\\_11xcucugasst.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/11x/user/guide/assistant/b_11xcucugasst.html).

## Message Notification Received When No Unread Messages

When users are members of a distribution list that is the recipient of a call handler that is configured to mark messages for dispatch delivery, it is possible for a user to receive a message notification for a message that no longer appears in the user inbox when he or she attempts to access it. This can happen because another member of the distribution list has accepted the message between the time that the notification was sent and the time that the user tries to listen to the message.

When configuring message notification rules to include dispatch messages, make users aware that by the time they receive the notification and call in to retrieve the message, it may be gone from their mailboxes because another user has already accepted the message.

For more information on dispatch messages, see the “[Dispatch Messages](#)” section in the “[Messaging](#)” chapter of the System Administration Guide for Cisco Unity Connection *Release 11.x*, available at [https://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/11x/administration/guide/b\\_cucsag.html](https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/11x/administration/guide/b_cucsag.html).

## Message Notification Received When No Unread Messages